

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Lee and McPherron      Art Unit: Unassigned  
Parent Serial No.: 08/967,089      Examiner: Unassigned  
Parent Filing Date: November 10, 1997  
Serial No.: Unassigned  
Filed: September 11, 2003  
Title: METHODS FOR DETECTION OF MUTATIONS IN MYOSTATIN  
VARIANTS

**Mail Stop PATENT APPLICATION**

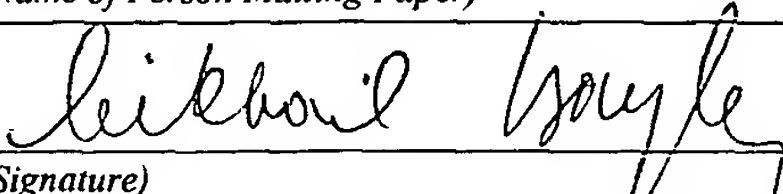
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Sir:

In accordance with 37 § CFR 1.97, Applicants bring to the Examiner's attention the related parent patent application, U.S. Serial No. 08/967,089, filed November 10, 1997, which is relied upon for an earlier filing date under 35 USC § 120. For the convenience of the Examiner, copies of the PTO Forms 892 and 1449 are enclosed.

It is respectfully requested that these references be considered in the examination of this application and their consideration be made of written record in the application file.

<b>CERTIFICATION UNDER 37 CFR §1.10</b> "EXPRESS MAIL" Mailing Label Number: <b>EV 318 738 188 US</b> Date of Deposit: <b>September 11, 2003</b>	
I hereby certify that this correspondence is being deposited with the United States Postal Service as "Express Mail Post Office to Addressee" with sufficient postage on the date indicated above and is addressed to: Mail Stop PATENT APPLICATION, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.	
MIKHAIL BAYLEY (Name of Person Mailing Paper)	
 (Signature)	September 11, 2003 (Date)

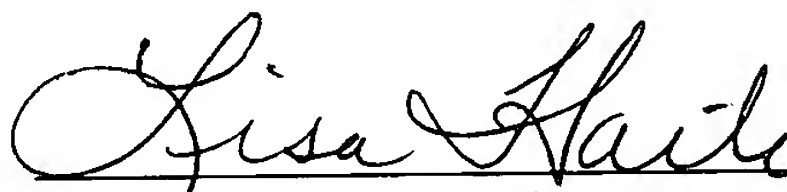
In re Application of:  
Lee and McPherron  
Application No.: Unassigned  
Filed: September 11, 2003  
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PATENT  
Attorney Docket No.: JHU1410-1

No fee is deemed necessary in connection with the filing of this Information Disclosure Statement, because it is being filed prior to the receipt of a first office action on the merits of the above-captioned application. However, if any fee is required, authorization is hereby given to charge any fees associated with the filings submitted herewith, or credit any overpayment to Deposit Account No. 50-1355. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

Date: September 11, 2003



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San Diego, CA 92121-2133

SUBSTITUTE FORM PTO-1449  
(MODIFIED)DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.  
07265/127001SERIAL NO.  
08/847,910INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT  
(Use several sheets if necessary)APPLICANT:  
Se-Jin Lee, et al.FILING DATE  
4/28/97GROUP  
1646

(37 CFR 1.98(b))

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		PATENT NUMBER	ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
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## FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION

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	AI							
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## OTHER DOCUMENTS (including Author, Title, Date, Place of Publication)

	AK	MCDOWELL et al. Effects of Exogenous Growth Hormone on Milk Production and Nutrient Uptake by Muscle and Mammary Tissues of Dairy Cows in Mid-Lactation. Australian Journal of Biological Sciences, Vol. 40, No. 3, pages 295-306, see Abstract.
	AL	EVOCK et al. Pituitary Porcine Growth Hormone (pGH) and a Recombinant pGH Analog Stimulate Pig Growth Performance in a Similar Manner. Journal of Animal Science, Vol. 66, No. 8, pages 1928-1941, see Abstract.
	AM	FLAKOLL et al. Influence of Alpha-Ketoisocaproate on Lamb Growth, Feed, Conversion, and Carcass Composition. Journal of Animal Science, Vol. 69, No. 4, pages 1461-1467, see Abstract.
	AN	DELI et al. Biochemical Study of Muscle Samples from Chicken Embryos Affected by Wofatox 50 EC. Archives of Toxicology, Vol. 8, pages 277-279, see Abstract.
	AO	FAULKNER et al. Effect of Testosterone Propionate on Performance and Carcass Characteristics of Heifers and Cows. Journal of Animal Science, Vol. 67, No. 8, pages 1907-1915, see Abstract.
	AP	ZHU et al. Survey of Major Histocompatibility Complex Class II Haplotypes in Four Turkey Lines Using Restriction Fragment Length Polymorphism Analysis with Nonradioactive DNA Detection. Poultry Science, Vol. 74, No. 7, pages 1067-1073, see Abstract

EXAMINER

DATE CONSIDERED

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

SUBSTITUTE FORM PTO-1449 (MODIFIED)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET # 07265/129001	SERIAL NO. 08/862,445
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)		APPLICANT: Lee et al.	
(37 CFR 1.98(b))		FILING DATE 05/23/97	GROUP 1801

## U.S. PATENT DOCUMENTS

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## FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION

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AI						
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## OTHER DOCUMENTS (including Author, Title, Date, Place of Publication)

AK	Bowie et al., "Deciphering the Message in Protein Sequences: Tolerance to Amino Acid Substitutions", <i>Science</i> , 247:1307-1310.
AL	Rudlinger, "Characteristics of the amino acids as components of peptide hormone sequence", <i>Peptide Hormones</i> , Parsons Ed., University Park Press, Baltimore, pp. 1-7
AM	Wells, "Additivity of Mutational Effects in Proteins", <i>Biochemistry</i> , 29:8507-17
AN	Ngo et al., "The Computational Complexity, Protein Structure Prediction, and the Levinthal Paradox", <i>The Protein Folding Problem and Tertiary Structure Prediction</i> , Mertz et al., eds., Birkhauser, Boston, pp. 491-5
AO	Massague, "The TGF- $\beta$ Family of Growth and Differentiation Factors", <i>Cell</i> , 49:437-38
AP	Callard et al., "IL-1", <i>The Cytokine FactsBook</i> , Academic Press, London, pp. 31-2
AQ	McPherron et al., "GDF-3 and GDF-9: Two New Members of the Transforming Growth Factor- $\beta$ Superfamily Containing a Novel Pattern of Cysteines*", <i>The Journal of Biological Chemistry</i> , 268(5):3444-49 (1993)
AR	Lee, "Expression of growth/differentiation factor 1 in the nervous system: Conservation of a bicistronic structure", <i>Proc. Natl. Acad. Sci. USA</i> , 88:4250-54 (1991)
AS	Lee, "Identification of a Novel Member (GDF-1) of the Transforming Growth Factor- $\beta$ Superfamily", <i>Molecular Endocrinology</i> , 4(7):1034-39 (1990)
AT	Gene Sequence Database - Isolation of Vgr-2

EXAMINER

DATE CONSIDERED

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Sheet 1 of 1

SUBSTITUTE FORM PTO-1449 (MODIFIED)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 07265/131001	SERIAL NO. 08/967089
		APPLICANT: Se-Jin Lee and Alexandra McPherron	
		FILING DATE 11/10/1997	GROUP 11034

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT  
(Use several sheets if necessary)

(37 CFR 1.98(b))

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		PATENT NUMBER	ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
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	AN							
	AO							
	AP							

OTHER DOCUMENTS (including Author, Title, Date, Place of Publication)

8x6	AQ	Kambadur, et al.; "Mutations in myostatin (GDF8) in Double-Musled Belgian Blue and Piedmontese Cattle"; Genome Research, 7:910-915 ©1997 by Cold Spring Harbor Laboratory Press
1	AR	Dickman, Steven; "Gene Mutation Provides More Meat on the Hoof"; Science, Vol. 277, 26 Sept. 1997, pgs. 1922-1923
	AS	Westhusin, Mark; "From mighty mice to mighty cows"; Nature Genetics, Vol. 17, September 1997, pgs. 4-5
871	AT	Grobet, et al.; "A deletion in the bovine myostatin gene causes the double-musled phenotype in cattle"; Nature Genetics, Vol. 17, September 1997, pgs. 71-74

EXAMINER B.Z. Lison	DATE CONSIDERED 12-19-98
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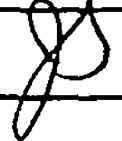
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Mail to Applicant

Sheet 1 of 1

SUBSTITUTE FORM PTO-1449 (MODIFIED)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 07265/131001	SERIAL NO. 08/967,089
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)		APPLICANT: Se-Jin Lee et al.	
(37 CFR 1.98(b))		FILING DATE 11/10/97	GROUP 1634

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		PATENT NUMBER							ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	5	8	1	4	4	9	1	9/29/98	Vijg et al.			
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OTHER DOCUMENTS (including Author, Title, Date, Place of Publication)

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EXAMINER <i>Jeffrey Lee</i>	DATE CONSIDERED <i>7/13/99</i>
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EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<b>Notice of References Cited</b>	Application/Control No. 08/967,089	Applicant(s)/Patent Under Reexamination MADZAK ET AL.	
	Examiner Jeffrey Siew	Art Unit 1656	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-5,756,295	05-1998	Onda et al	435/6
	B	US-			
	C	US-			
	D	US-			
	E	US-			
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	J	US-			
	K	US-			
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**FOREIGN PATENT DOCUMENTS**

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**NON-PATENT DOCUMENTS**

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\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



<b>Notice of References Cited</b>				Application No. <b>08/967,089</b>		Applicant(s) <b>Ge-Jin Lee et al.</b>	
				Examiner <b>Bradley L. Sisson</b>		Group Art Unit <b>1634</b>	
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U.S. PATENT DOCUMENTS							
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NON-PATENT DOCUMENTS							
		DOCUMENT (Including Author, Title, Source, and Pertinent Pages)					DATE
	U	Research Genetics, "Designer PCR(TM)" (advertisement), Nucleic Acid Research, Vol. 22, No. 15.					8/1994
	V						
	W						
	X						



<b>Notice of References Cited</b>	Application/Control No. 08/967,089	Applicant(s)/Patent Under Reexamination MADZAK ET AL.	
	Examiner Jeffrey Siew	Art Unit 1656	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification	
	A	US-6,103,466-A	08-2000	Grobet et al	435	6
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\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
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<b>Notice of References Cited</b>				Application No. 08/525,596		Applicant(s) Lee et al.	
				Examiner Elizabeth C. Kemmerer		Group Art Unit 1801	
Page 2 of 2							
U.S. PATENT DOCUMENTS							
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NON-PATENT DOCUMENTS							
		DOCUMENT (Including Author, Title, Source, and Pertinent Pages)					DATE
	U	Massague. Cell 49:437-8.					1987
	V	Callard et al. The Cytokine FactsBook, Academic Press, London, pp. 31-2.					1994
	W						
	X						

Elizabeth C. Kemmerer 1/30/97

<b>Notice of References Cited</b>				Application No. <b>08/525,596</b>		Applicant(s) <b>Lee et al.</b>	
				Examiner <b>Elizabeth C. Kemmerer</b>		Group Art Unit <b>1801</b>	

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	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
U	Bowie et al. Science 247:1307-1310.	1990
V	Rudinger. Peptide Hormones, Parsons, ed., University Park Press, Baltimore, pp. 1-7.	1976
W	Wells. Biochemistry 29:8507-17.	1990
X	Ngo et al. The Protein Folding Problem and Tertiary Structure Prediction. Merz et al., eds., Birkhauser, Boston, pp. 491-5.	1994

*Elizabeth C. Kemmerer 1/30/97*

# **Notice of References Cited**

Application No.  
**08/795,071**

Applicant(s)  
**Lee & McPherron**

Examiner  
**Jill D. Schmuck**

Group Art Unit  
**1632**

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## **U.S. PATENT DOCUMENTS**

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	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
U	<del>Evock et al., Journal of Animal Science, Vol. 66, Pages 1928-1941, Abstract only.</del>	8/88
V	Flakoll et al., Journal of Animal Science, Vol. 69, Pages 1461-1467, Abstract only.	4/91
W	<del>Deli et al., Archives of Toxicology, Vol. 8, Pages 277-279, Abstract only.</del>	1985
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<b>Notice of References Cited</b>	Application No. <b>08/795,071</b>	Applicant(s) <b>Lee &amp; McPherron</b>	
	Examiner <b>Jill D. Schmuck</b>	Group Art Unit <b>1632</b>	Page 3 of 4

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DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
<del>U</del> Gura, Science, Vol. 270, Pages 575-577.	10/27/95
<del>V</del> Zhu et al., Poultry Science, Vol. 74, Pages 1067-1073, Abstract only.	7/95
<del>W</del> Faulkner et al., Journal of Animal Science, Vol. 67, Pages 1907-1915, Abstract only.	8/89
<del>X</del> McDowell et al., Australian Journal of Biological Sciences, Vol. 40, Pages 295-306, Abstract only.	1987

<b>Notice of References Cited</b>	Application No. <b>08/795,071</b>	Applicant(s) <b>Lee &amp; McPherron</b>	
	Examiner <b>Jill D. Schmuck</b>	Group Art Unit <b>1632</b>	Page 2 of 4

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	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
U	<del>K</del> appel et al., Current Opinion in Biotechnology, Vol. 3, Pages 548-553.	1992
V	<del>S</del> trojek & Wagner, Genetic Engineering: Principles and Methods, Vol. 10, Pages 221-246.	1988
W	<del>E</del> bert et al., Molecular Endocrinology, Vol. 2, Pages 277-283.	1988
X	<del>H</del> ammer et al., Journal of Animal Science, Vol. 63, Pages 269-278.	1986

<b>Notice of References Cited</b>		Application No. <b>08/795,071</b>		Applicant(s) <b>Lee &amp; McPherron</b>			
		Examiner <b>Jill D. Martin</b>		Group Art Unit <b>1632</b>	Page 1 of 1		
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		DOCUMENT (Including Author, Title, Source, and Pertinent Pages)					DATE
	U	Moreadith et al., J. Mol. Med., Vol. 75, pages 208-216.					1997
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U.S. PATENT DOCUMENTS					
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A	5,585,479	12/17/96	Hoke et al.	536	24.5
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NON-PATENT DOCUMENTS	
	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)
U	Bradley et al., Biotechnology, Vol. 10, Pages 534-539.
V	Seamark, Reproduction, Fertility and Development, Vol. 6, Pages 653-657.
W	Mullins et al., Journal of Clinical Investigation, Vol. 98, Pages S37-S40.
X	Wall, Theriogenology, Vol. 45, Pages 57-68.